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ABSTRACT

This paper investigated whether educational reforms in England and Wales since 1988 have differentially affected schools serving socially disadvantaged communities, focusing on the impact of marketization and performance regulation in England. Data came from the Impact of Competition on Secondary Schools (ICOSS) project, a longitudinal study of the impact of competition on over 300 secondary schools. Data collection occurred from 1993-98 and included an administrative database, a mailed survey of teachers, interviews with headteachers, and case studies of three schools. Results are presented according to: how social and academic polarization between schools changed since 1992 and why; whether improved academic performance at the school level was more difficult to achieve for schools with more socially disadvantaged students; whether marketization impacted schools with more socially disadvantaged students differently; and how student communities affected schools' improvement strategies and competitive responses. Results indicate that the proportion of socially disadvantaged students in a school community has had a negative impact on attracting resources and improving achievement, and the two factors are interrelated. Four appendixes present data on polarization, ICOSS survey responses on perceptions of competition, school budget adjustments, and additional multiple regressions. (Contains 37 references.) (SM)

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The impact of quasi-markets and performance regulation on socially disadvantaged schools

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Paper presented at Annual Meeting of American Educational Research Association, New Orleans, April 24-28, 2000

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1. INTRODUCTION

Educational reforms in England and Wales since 1988 have been driven by the imperative to raise educational standards, as defined by central government (DFE, 1992; DfEE, 1997). These reforms have been characterised by the continuing evolution of two regulatory principles - quasi-markets and performance regulation. This paper considers evidence as to whether these reforms have impacted differentially on schools serving socially disadvantaged communities.

1.1 POLICY CONTEXT

The 1988 Education Reform Act brought in a schools quasi-market (Glennester, 1991; Le Grand, 1990; Levacic, 1994) in which parents can exercise unrestricted choice of state school, provided there is a place available and, for certain schools, that their child meets any selection criteria in terms of religious affiliation or ability. Schools are funded by formula largely according to the number of pupils on roll and are required to manage fully delegated budgets for almost all resources, including teachers. The quasi-market reforms were progressively buttressed by strengthening 'performance regulation', through the establishment of a national curriculum, national tests at four stages of education, publication of school test and examination performance tables, and the creation in 1993 of the Office for Standards in Education (OFSTED) which oversees the national inspection at regular intervals of all schools. Schools are inspected against a public set of criteria, inspection reports are published and available on the internet, and schools have to implement Action Plans for the key issues for improvement set out in the inspection report. Schools that fail an OFSTED inspection are 'placed in special measures' and their progress regularly monitored by inspectors who determine whether the school can be taken out of special measures.

The election of a Labour Government in May 1997 further strengthened performance regulation. Under the 1998 School Standards and Framework Act, schools in special measures that fail to improve are closed and reopened as a 'Fresh Start' school. Targets for exam and test results have been set nationally and for local education authorities (LEAs) and schools. Centrally devised literacy and numeracy teaching programmes have been instituted. Central government treats local education authorities as its agents for delivering school improvement. LEAs are subject to inspection and if a LEA's services for the support of schools are judged inadequate they can be replaced by private sector provision. Although the Labour Government places more emphasis than the previous government on co-operation and partnership between schools, most of the 'marketising' reforms remain in place.

Conflicting views on the likely effects of increased marketisation on the social stratification of schools and on the educational performance of schools serving socially diverse communities are well known. For example, Chubb and Moe, (1990), Hillgate Group, (1986) and Tooley (1996) argue in favour, while Ball, (1993, 1996), Hirsch (1994), Levin (1990), Walford (1994) and Witte (1990) express reservations or opposition. One of the key issues in this debate is the impact of greater parental choice of school and competition between schools for students on the distribution of socially disadvantaged students between schools. This issue is important on two counts: first for the degree of social stratification and its implications for social cohesion; second, because of the 'contextual effect' – the influence on individual students' educational attainment of their peer group's prior attainment and social background (Sammons et al., 1996).

Proponents of marketisation argue that it will reduce social stratification of school communities compared to a system which allocates students to schools strictly in accordance with their place of residence, itself dependant on parental income. It is argued that replacing

strict catchment area allocation by parental choice of school enables students living in socially disadvantaged districts to attend schools in more favoured areas, thus reducing school concentrations of socially disadvantaged students. The second element of the pro-market hypothesis is that competition makes schools strive for high educational standards in order to attract students to the school. The opposite view point is that marketisation favours students whose parents possess the 'cultural capital' to make discerning choices about schools. Also greater competition between schools, focused on academic results, leads to vying for more able pupils, disadvantaging those with low academic potential (see for example Walford, (1994 page 162)).

There is conflicting empirical evidence on the impact of the education reforms in England since 1988 on the social composition of school communities and on the performance of schools with higher proportions of socially disadvantaged students. Using very different methodologies, researchers of the English schools system have reached contrasting conclusions. For example Gewirtz et al., (1995) in a qualitative study of three 'competitive' clusters of schools in three London LEAs concluded (page 188):

> Across schools, we appear to be seeing an intensification of status hierarchies, provisional differentiation and segregation within the state system. Working class children, and particularly children with SEN, are likely to be increasingly 'ghetto'ized' in under-resourced and understaffed low status schools.

In contrast, Gorard and Fitz (1999a, 1999b) in a quantitative study of all English secondary schools, using data on free school meals entitlement from 1989 to 1997, found that social segregation (measured as the proportion of students who would need to change schools in order for all schools in an area to have the same proportion of socially disadvantaged students) had decreased, both nationally and in 84 out of 122 LEAs. This approach to measuring distributional effects has been criticised for failing to take account of changes in the concentration of disadvantage in particular schools. For example Gibson and Asthana (1999) argue that polarisation can only be assessed by examining how schools have performed over time within their local markets. They grouped 457 schools into equal sized local 'markets' of five schools according to the degree to which schools drew pupils from the same census districts. They found that the top ranked schools had improved exam results over the period 1994-98 by more than the bottom ranked schools, while also reducing the proportion of socially disadvantaged students compared to bottom ranked schools which had experienced a slight increase[1].

1.2. ISSUES TO BE ADDRESSED

In this paper we focus on the impact of marketisation and performance regulation in England on schools serving socially disadvantaged student communities. We do not intend to imply that schools can be neatly classified as belonging to the category of ' serving socially disadvantaged student communities', while other schools do not. Rather there is a continuum from schools with very high proportions of socially disadvantaged students to those with very low proportions. The evidence presented here is drawn from the Open University's Impact of Competition on Secondary Schools longitudinal study, which combines quantitative and qualitative data. The following questions are addressed, each in a separate section of the paper.

Section 2. How have social and academic polarisation between schools changed since 1992 and what might account for these changes?

Section 3. Is improved academic performance (in terms of examination results) at the level of the school more difficult to achieve for schools with higher concentrations of socially disadvantaged students?

Section 4 Has marketisation (pupil driven financial allocations and increased parental choice) impacted differentially on schools with higher concentrations of socially disadvantaged students?

Section 5 How do their student communities affect schools' improvement strategies and competitive responses?

1.3. THE ICOSS DATA SETS

The ICOSS project is a longitudinal study of the impact of competition on over 300 secondary schools in six LEA areas. Complementary data sets have been generated, ranging from quantitative, longitudinal data to in-depth qualitative examination of case study schools. Quantitative data have been assembled on school rolls, budgets, examination results and a social disadvantage indicator from 1991 to 1998. Data collection started in 1993 and was completed in 1998 (though data have been gathered relating to years prior to the start date - see below). The data sets are as follows:

1) Administrative data base. Data on 323 secondary schools in six local education authority (LEA) areas in England - derived from administrative sources (the LEAs, Department for Education and Employment, Funding Agency for Schools) - have been collected for the period 1990/91 to 1995/96 (with examination data and free school meals data extended to 1998). These data provide indicators of school performance in relation to level of and improvement in public examinations, student recruitment, and attracting financial resources.

2) Postal survey of headteachers. Headteachers of schools in the administrative database were surveyed in the Autumn term, 1997 (A response rate of 69%, 227 in all, was achieved).

3) Seventeen headteachers, selected from the ICOSS schools, were interviewed. Schools were selected to represent four types of local area distinguished by permutations of (a) higher and lower degrees of structural competition (b) greater and lesser extent of examination improvement over the six years since 1991. Most interviews were undertaken in 1997; two were carried out in 1998 and early 1999.

4) Case studies of three schools. These were selected from the schools where headteachers were interviewed. Interviews with a range of senior and other teaching staff, as well as students, were carried out and documentation and other data collected from each of the schools.

Background information on the six local education authority (LEA) areas in which the study was undertaken is shown in Table 1.

Table 1: Background information on ICOSS Local Education Authority (LEA) areas and interviewed headteachers

LEA	Selected data on LEAs*				Postal survey of heads: selected data**			Interviewed heads***	
	Auth-ority type	School system	% of pupils entitled to free school meals 1992-98	No. (%) of GMB schools by 1995-96	No. of heads contacted	Compl-eted q/aires: (response - rate)	% rating climate as highly competit-ive	Heads' letter codes	gender; type of school
LEA 6	county	some selection	13%	69 (67%)	104	78 (75%)	**58%**	H: I: R:	male, GM mixed 11-18 comprehensive male, LEA mixed 11-16 comprehensive male, GM mixed 11-18 comprehensive
LEA 3	metro-politan	some selection	34%	18 (23%)	79	49 (62%)	**51%**	F: G:	male, GM mixed 11-16 comprehensive male, LEA boys 11-16 comprehensive
LEA 4	county	compre-hensive	12%	10 (25%)	40	26 (65%)	**31%**	P: Q:	male, LEA mixed 11-18 comprehensive female, GM mixed 11-18 comprehensive
LEA 5	county	mainly selective	10%	9 (21%)	42	34 (81%)	**26%**	A: B: L: M:	male, LEA mixed 11-16 comprehensive female, LEA mixed 11-16 comprehensive male, GM boys 11-18 grammar female, LEA (RC) mixed 11-18 comprehensive
LEA 1	county	compre-hensive	8%	0 (0%)	35	25 (71%)	**16%**	J: K:	female, LEA mixed 11-18 comprehensive male, LEA (RC) mixed 11-18 comprehensive
LEA 2	metro-politan	compre-hensive	25%	2 (7%)	27	15 (56%)	**13%**	C: D: E: N:	female, LEA mixed 11-16 comprehensive male, LEA mixed 11-16 comprehensive male, LEA mixed 11-16 comprehensive male, LEA mixed 11-16 comprehensive

* Source: ICOSS Study administrative database.

** Further details in Levacic, Woods, Hardman and Woods 1998b.

*** Seventeen headteachers were interviewed between July 1997 and January 1999, selected from 300+ schools in the ICOSS administrative data set.

2. POLARISATION BETWEEN SCHOOLS

The first issue addressed is that of polarisation between schools, whether it has increased and what might account for any changes. In investigating this issue we distinguish between:

(a) the *degree of differentiation between school communities*, which may be by social, religious, racial or academic characteristics: this is a static concept measurable at a point in time;

and

(b) *polarisation*, which is the *change over time* in the degree of differentiation. Polarisation refers to an increase over time in the differentiation between schools in terms of social or academic features. Where a decrease in such differentiation occurs we refer to it as decreased polarisation.

Often 'segregation' is used to refer to the kind of differentiation defined above, when there is an explicit or implicit value judgement that such differentiation is socially undesirable (e.g. segregation is the term used by Hirsch, 1994 and Gorard & Fitz, 1999a). In this paper we distinguish between two types of differentiation or segregation: 'social', which refers to the degree by which school student communities differ in terms of social disadvantage, and 'academic' which relates to differences in raw examination performance.

Polarisation is a dynamic concept: it is a process whereby differences or hierarchies between schools are created or extended over time. The direction and speed of polarisation occurring in the presence of regulated quasi-markets are most likely determined by local factors as much as by national conditions which create the macro-policy environment – including performance regulation – within which schools operate (Woods et al., 1998). As Gibson and Asthana (1999) point out, since polarisation is concerned with the effects on schools of their position in a local market hierarchy, it has to be studied at local level.

In this section of the paper we examine changes in social and academic polarisation at local level. This requires:

1. an operationalisation of the concept of polarisation in the social and academic dimensions;
2. a definition of the local area within which polarisation between schools is investigated.

Any empirical study of this issue has to determine how it will define the 'local level' – whether at LEA level, for which data are readily available, or a 'schools market level', as defined and operationalised by the researcher. Studies also need to select between different possible measures of segregation or polarisation. Differences in definition of both locality and of statistical measure of segregation/ polarisation can result in different empirical findings.

2.1 OPERATIONALISATING THE OF CONCEPT OF POLARISATION

We offer two measures of social differentiation between schools and hence of social polarisation. The first measure uses the notion of a local hierarchy of schools, the second measure adopts the segregation index proposed by Gorard and Fitz (1998, 1999a, 1999b).

<u>The concept of a school hierarchy</u>

A school hierarchy exists when parents and other stakeholders perceive a group of local schools to be ranked in terms of desirable features, in particular academic results and social standing (Woods et al., 1998). One of the more dire predictions concerning the impact of increased marketisation of schools is that it would produce a concentration of 'sink' schools, which are at the bottom of local school hierarchies and become increasingly differentiated from other schools in the locality (e.g. Bowe et al., 1994; Jonathan, 1990).

The school hierarchy definition of differentiation between schools is the extent of the gap between

schools at the top and bottom of a hierarchy of schools in a local competitive arena. Glatter and Woods (1994, page 57) define a local competitive arena as an ideal type – 'an area in which schools draw from a common population of parents and pupils. This arena is a battleground upon which schools vie with one another for parental and pupil support'. To make this definition of polarisation operational, we need to define measurable variables for both the degree of hierarchy and the local competitive arena for which the hierarchy is defined and measured.

The approximate area of competition

In practice all schools do not belong to discrete local competitive arenas, in which they draw on a common pool of parents and pupils. Instead schools may draw on 'client' pools from two or more overlapping competitive arenas. However, in order to operationalise the concept of a local competitive arena, the schools in the ICOSS study were divided into groupings of schools which, within the same LEA, appeared to serve relatively distinct communities and could therefore be said to be potentially in competition with each other. We refer to these actual groupings as Approximate Areas of Competition (AACs) to distinguish them from the ideal type. Although there were no strict criteria for defining AACs, judgements were guided by a rigorous analysis of all available data, which included maps and the use of the software MapInfo to take account of:

- the size and relative location of cities, towns and larger villages (over 3000 inhabitants);
- road links between conurbations.

In the two metropolitan LEAs, where the number and density of schools and populations was high, schools were grouped into the clusters used by the respective LEAs. Altogether, 71 AACs containing two or more schools in continuous existence from 1992 to 1998 were defined.

School hierarchy index of polarisation

The *degree of school hierarchy* is defined as the difference between the 'bottom' and 'top' school in each AAC, using the proportion of students eligible for free school meals as the indicator of social disadvantage for a social hierarchy index and the proportion of students gaining five or more passes at grades A* to C at GCSE (General Certificate of Secondary Education)[2] for an academic hierarchy measure.

To develop an *indicator of polarisation* for each AAC the following steps were performed:

1. a calculation for each year 1992 to 1998 of the difference between the lowest and highest scoring school in each AAC in (a) proportion of students eligible for free school meals; and in (b) the proportion of students gaining five or more passes at grades A* to C at GCSE: this gives a school hierarchy index for the social and academic domains;
2. to provide a single indicator of *polarisation* over the period 1992-98, the average of the measure of the degree of school hierarchy in the first two years (1992 and 1993) was subtracted from the average measure of school hierarchy for the last two years (1997 to 1998). (The averages of first and last two years were used to reduce the possibility of an a-typical single year distorting the index.)

Social segregation index

The second social polarisation index used is that of Gorard and Fitz (1999a). In order to measure school social segregation for an area, they calculate the number of students in the area who would need to switch schools in order for all schools in the area to have the same percentage of socially disadvantaged students. The main measure of social disadvantage they use, since it is available for the ten year period they investigated, is eligibility for free school meals. *The social segregation index is thus the number of students as a proportion of the total eligible for free school meals in the*

area who would need to switch schools for all schools to have the same percentage of students eligible for free school meals.

The algebraic expression for the social segregation index for all schools in a defined 'area' is the sum over all schools of the absolute value of[3]:

$$\frac{(\text{School's FSM percentage} - \text{Area FSM percentage}) \times \text{School's total student roll}}{\text{Total number of students entitled to FSM in the Area}}$$

We calculated the social segregation index for each AAC for the years 1992 to 1998. In order to obtain a single measure of social polarisation over the period, the average of the index for the first two years (1992 and 1993) was subtracted from the average for the last two years (1997 and 1998), as done in the case of the school hierarchy index.

Academic polarisation

A measure of academic polarisation was obtained the same way as for the social polarisation index based on school hierarchy, except that GCSE results were used as a measure of the distance between the top and bottom schools in each AAC.

Comparing the polarisation indices

For each polarisation index, AACs were classified as having experienced increased or decreased polarisation over the period 1992 to 1998 according to whether the value of the index was greater than zero (increased polarisation) or less than zero (decreased polarisation). The findings are presented in Table 2. According to the school hierarchy index, 44 AACs experienced increased and 27 decreased polarisation. The corresponding numbers for the social segregation index were 40 and 31. The correspondence between the social hierarchy and segregation indices was quite high, with 63 out of 71 AACs being classified the same way by both indices. The correlation between the indices is 0.410, indicating greater differences in size of polarisation measured by the size of the two indices than in direction of the change in polarisation which they indicate.

Table 2 Social polarisation 1992 –1998 by approximate area of competition (AAC) measured by school hierarchy index and social segregation index.

	School hierarchy index	*Social segregation index*	*Academic hierarchy index*
Number of AACs where polarisation increased	44	40	35
Number of AACs where polarisation decreased	27	31	36
Total number o f AACs	71	71	71

The social segregation index reveals less polarisation and in certain areas can mask a substantial increase in the divergence between the top and bottom schools. The most spectacular lack of correspondence between the two indices was for AAC 405, where the school hierarchy polarisation index was 14.2 and the social segregation polarisation index was –0.03. As shown in Table A1 in Appendix 1, at the beginning of the period school A had a very similar FSM percentage to three of the other four schools in the AAC. However, it experienced a growing concentration of socially disadvantaged students and a falling total roll, until it was closed in 1998. Once the school had

closed and its students had been dispersed among the other schools, social polarisation by both indices would have fallen.

Academic polarisation is less marked than social polarisation, as can be seen from Table 2. Half of AACs experienced increased academic polarisation and half decreased polarisation.

2.2 FACTORS ASSOCIATED WITH SOCIAL POLARISATION

Having obtained descriptive statistics, which show that social polarisation using both indices occurred in over half of the approximate areas of competition, the next question addressed is whether there are any particular factors associated with social polarisation. The available data allowed us to test statistically whether the following factors were associated with social polarisation.

1) the degree of social deprivation in the AAC (measured by the percentage of students in the AAC eligible for free school meals);
2) the level of academic attainment in the AAC (measured by the percentage of students achieving 5 or more GCSE grades A* - C averaged over the final three years of the period studied (1996 to 1998));
3) The rate of improvement in GCSE results over the period 1991 to 1998 (measured as the average annual change in the percentage of students obtaining (i) 5 or more GCSE grades A* - C (ii) 5 or more GCSE grades A* - G (iii) 1 or more GCSE grades A* - G);
4) Proportion of grant maintained (GM)[4] schools in the AAC;
5) Degree of academic polarisation (measured by the index constructed for this);
6) The degree of perceived competition in the AAC as reported by headteachers in the ICOSS survey (see ICOSS data set 2 and Appendix 2 for further details);
7) The number of perceived competitor schools in the AAC (also from the ICOSS survey: see Appendix 2 for further details).

Analysis of variance (one way ANOVA) was performed for the two groups of AACs: those with increased and those with decreased social polarisation, using both indices of polarisation. The ANOVA test indicates whether there are statistically significant differences in the mean values of the variables listed 1 to 7 above for the two groups of AACs (increased and decreased social polarisation). No significant differences were found for the degree of social deprivation, GCSE results, or improvement over time in GCSE results for AACs experiencing increased or decreased polarisation.

However, the proportion of GM schools was significantly higher in AACs where social polarisation had increased, as was the degree of academic polarisation. The perceived degree of competition, using both measures of competition, was also significantly higher in AACs with increased social polarisation. The findings were the same for both indices of social polarisation, though the degree of statistical significance was slightly higher in the case of the school hierarchy measure. Table 3 reports the findings for those variables with statistically significant differences in means. The mean values for the factors listed in the extreme left hand column are given for AACs with increased and decreased social polarisation, using both indices of polarisation. (SP(SH) denotes the school hierarchy index and SP(SS) the social segregation index).

Table 3 Factors associated with social polarisation: ANOVA test results

	Mean value of factor		*Statistics from ANOVA test* [1]		
Factor associated with polarisation	AACs with increased polarisation	AACs with decreased polarisation	F statistic for ANOVA	Significance of F statistic	Sig. of Levene statistic (homogeneity of variances)
SP(SH):Proportion of GM schools in AAC	0.35	0.16	6.389	0.014	0.394
SP(SS):Proportion of GM schools in AAC	0.34	0.20	3.358	0.071	0.654
SP(SH) Academic polarisation	4.28	-0.56	4.609	0.035	0.115
SP(SS) Academic polarisation	4.20	-0.72	3.342	0.072	0.070
SP(SH)[2] Degree of perceived competition	1.63	2.08	8.502	0.005	0.378
SP(SS)[2] Degree of perceived competition	1.68	1.99	3.947	0.052	3.947

Note 1: the significance of the Levene statistic should exceed 0.05 for there to be homogeneity of variances of the two groups of AACs as required for ANOVA. For the mean values of the factors for the two groups of AACs to be statistically significantly different the probability of the F statistic (shown in column five) must be less than 0.05 for 95 per cent confidence and less than 0.10 for 90 per cent confidence that the means are different.

Note 2:the lower the indicator digit, the higher degree of perceived competition.

2.3 CONCLUSIONS FROM FINDINGS ON SOCIAL POLARISATION

The ICOSS data, drawn from 6 LEAs, indicate that social polarisation occurred in slightly over half of AACs, whereas Gorard and Fitz (1999a) have concluded that nationally polarisation has diminished between 1989 and 1997 and fell in 84 out of 122 LEAs. We also calculated Gorard's and Fitz's social polarisation index for the ICOSS LEAs and found that three had experienced an increase, two a decline and one no change in social segregation. This suggests that the ICOSS LEAs may be biased towards those experiencing increased social polarisation. However, as Table 4 shows, all 6 LEAs contained both AACs which had increased and decreased social polarisation. The more finely grained analysis at AAC level also enables one to detect the impact of school closures in mitigating polarisation. In the ICOSS sample 25 out of 335 schools were closed between 1991-98. Schools that closed were smaller, had higher proportions of students eligible to free school meals and poorer examination results than continuing schools (see Table A2 in Appendix 2).

Table 4 Social polarisation (segregation) index for ICOSS LEAs

LEA	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*Change in segregation index 1992 to 1998*	*No of AACs with decreased polarisation*	*No of AACs with increased polarisation*
LEA1	0.54	0.53	0.52	0.48	0.49	0.47	0.48	-0.06	8	4
LEA2	0.49	0.52	0.53	0.55	0.55	0.52	0.54	0.05	4	4
LEA3	0.48	0.48	0.47	0.46	0.46	0.47	0.49	0.00	6	9
LEA4	0.42	0.42	0.42	0.47	0.46	0.45	0.46	0.04	3	5
LEA5	0.89	0.82	0.83	0.82	0.83	0.86	0.86	-0.03	3	5
LEA6	0.51	0.53	0.53	0.52	0.52	0.52	0.54	0.03	7	13

Increased polarisation is associated with a higher proportion of GM schools. This is supported by other evidence from the ICOSS study that GM schools over time reduced the proportion of the student roll eligible for free school meals (Levacic and Hardman, 1999). Social polarisation is also associated with academic polarisation, though this did not appear to affect the rate of improvement of GCSE examination results over time. Neither is there evidence that social polarisation occurred more predominantly in areas of higher social deprivation.

Social polarisation is also associated with a higher degree of competition, as perceived by headteachers. One might well expect polarisation and competition to be mutually reinforcing, with competition contributing to the process of polarisation, which itself stimulates competitive responses from schools. This is taken up later in the paper when qualitative data from head teacher interviews are drawn upon to examine how schools' internal improvement strategies and responses to competitive pressures are affected by social polarisation and the social composition of their student communities.

Having examined data at the level of the approximate area of competition, the next two sections of the paper turns to a consideration of evidence at the level of the school concerning the influence of the social composition of the school community on academic and financial performance.

3. IMPROVING ACADEMIC PERFORMANCE AND STUDENTS' SOCIAL STATUS

There has been considerable regulatory pressure in England for schools to improve their examination results. An important aspect of marketisation has been increasing the availability of information on schools' examination performance. From 1992, GCSE examination results for every school have been published in the national press and schools also have to publish their exam results in the Governors' Annual Report to Parents. Prior to this legislation, prospective parents could only compare local schools' exam results by obtaining information from each school individually. There is further regulatory pressure from OFSTED inspectors who scrutinise exam results, particularly in relation to evidence about students' prior attainment.

While there is an accumulation of evidence, both in studies utilising student level and school level data, that students' academic attainment is strongly influenced by social background variables (e.g. Coleman et al., 1966; Hanushek, 1997; Sammons, 1999; Teddlie and Reynolds, 2000), there is much less evidence on factors affecting changes over time in schools' academic performance. While examination results at school level are quite highly correlated with indicators of students' socio-economic status, the rate at which schools improve their examination results over time could, in principle, be unaffected by students' social status. We investigated this proposition by developing indicators of schools' examination improvement over time which were used as dependent variables in a set of multiple regressions which included indicators of the social status of the school community as the independent variables.

3.1 SCHOOL PERFORMANCE

School performance was measured in terms of General Certificate in Secondary Education (GCSE)[5] examination results. The three indicators of school level GCSE examination performance which have been published nationally since 1992 and for which we have continuous data from 1991 to 1998 are:

1. GCSE1: the proportion of students gaining 5 or more passes at grades A* - C (i.e. 'good' passes;
2. GCSE2: the proportion of students gaining 5 or more passes at grades A* - G (G is the lowest pass grade);

3. GCSE3: the proportion of students gaining 1 or more passes at grades A* - G

The average annual change over the period 1991-98 in the three GCSE indicators was used to provide three measures of the academic performance of individual schools[6].

Table 5: GSCE and A LEVEL Performance 1991-1998: English schools average pass rates and average annual rates of change for all English and ICOSS school

Percentage of pupils aged 15 at start of school year:-	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	England average annual change. 1991-98	ICOSS schools average annual change. 1991-98	ICOSS schools average annual change. 1992-98
with 5 or more A* to C grades	36.8	39	42	43.3	43.5	44.5	45.1	46.3	1.36	1.55	1.35
with 5 or more A* to G grades	79.5	82	84.3	85.6	85.7	86.1	86.4	87.5	1.14	1.06	0.78
with 1 or more A* to G grades	N/A	91.3	92	92.3	91.9	92.2	92.3	93.4	0.35	0.30	---

Source: DfEE School Performance Tables 1994 to 1998: Times Educational Supplement 1992 to 1993. DfEE Statistical Bulletin, 1991.

As can be seen from Table 5, Schools in England have been improving their performance in terms of the three indicators. We present changes between 1991 to 1998 and between 1992 and 1998, as there is some difference between the two periods.

The averages naturally mask considerable variations in the performance of individual schools. Among ICOSS schools, 93 percent improved their GCSE1 results over the period, 85 per cent improved their GCSE2 indicator but only half increased the proportion of students with any GCSE passes at all. It is notable that the GCSE1 indicator, which we term the 'headline' indicator, is the one given most official prominence, while the third indicator has had considerably less publicity.

3.2 EXAMINATION IMPROVEMENT AND SOCIAL DISADVANTAGE

We are particularly concerned with whether schools with higher concentrations of socially disadvantaged students improved their examination results over time at the same rate as schools with more socially privileged intakes. To test this hypothesis indicators of examination change over time were regressed on a set of independent variables, which included indicators of social disadvantage. Only the first two measures of examination improvement, GCSE1 and GCSE2, were used, as there was insufficient variation in the third measure, GCSE3.

The following independent variables were used as regressors.

1. Variables reflecting differences in school organisation, referred to as school type variables. These are:

   SIXFORM: presence of sixth form (students aged 16+ who stay in education beyond the minimum school leaving age)[7];

   DENOM: schools within the state sector which have a religious affiliation;

SINGLESEX: schools which educate boys or girls only. The dummy variable is 1 for an all girls school;

GM: grant maintained schools

SELECTIVE: these are long-standing grammar schools which admit students on the basis of cognitive attainment tests taken at 11 or 12.

2. Variables reflecting the degree of social deprivation of the school's student community. The one indicator of social deprivation available for all schools since 1992 is the proportion of students eligible for free school meals[8]. We have data on the percentage of students eligible for free school meals (FSM) in each year from 1992 to 1998. From this data we constructed three variables:

AVFSM: the annual average percentage of students eligible for FSM over the period 1991-98;

AVFSMDIFF: the difference between the school's FSM percentage and the LEA FSM percentage averaged over 1992-98. The advantage of this variable over AVFSM is that it reflects a school's social deprivation relative to other schools in its locality, given that poverty levels vary geographically. This will reflect the local social hierarchy of schools better than AVFSM. A further advantage of AVFSMDIFF is that it is more or less normally distributed whereas AVFSM has a very skewed distribution.

FSMDIFCHANGE: the change in a school's relative social deprivation between the beginning and end of the period studied. In order to prevent atypical values having a predominant influence on the measure of change, the average of FSMDIFF for the last two years (1997 and 1998) was subtracted from the average for the first two years (1992 and 1993). So a negative value of this statistic indicates an increase over time in the proportion of socially disadvantaged students.

3. The school's examination performance at the beginning of the period, 1991, was included as it is hypothesised that schools starting from a lower base had more incentive to improve exam results. The two base year exam results used are:

GCSE1_91: the proportion of students gaining 5 or more passes at grades A* - C in 1991;

GCSE2_91: the proportion of students gaining 5 or more passes at grades A* - G in 19991.

4. Variables relating to the recruitment of students:

AVROLL: the annual average number of students enrolled at the school from 1992-98. All schools which were closed, amalgamated or opened during the period were omitted.

SPARECAP: Spare capacity is the ratio of the number of intake year students admitted to the school divided by the standard number/agreed admissions limit, which is the statutorily determined maximum number of students a school is required to admit: it is therefore a measure of full capacity[9]. Spare capacity was averaged over the period studied.

5. Variables relating to changes over time in the school's budget were included to test if budgetary growth were associated with examination improvement. Data on schools' budgets were collected from LEAs and for GM schools from the Funding Agency for Schools[10]. These were adjusted as far as possible to ensure comparability between LEAs and LEA and GM schools (see Appendix 3). It is hypothesised that an increase over time in the school budget would assist the schools' efforts to improve its examination results[11]. Two versions of the budget change variable were tried:

BUDCHANGE the annual average change in the school's budget[12]

BUDCHANGE/ST the annual average change in the school's budget per student.

6. Individual LEAs was represented by dummy variables (school location in any one of LEAs1 to 5 rather than in LEA 6 was indicated by 1).

Two measures of both GCSE1 and GCSE2 were used as the dependent variable. The first measured the average annual change in exam performance from 1991 to 1998 and the second from 1992 to 1998. This was done to check for stability in the findings since the correlation between the two GCSE1 measures was 0.734 and that between the two GCSE2 measures 0.732, indicating some differences in individual schools' performances when the two time periods are compared.

Findings from the regression tests are reported in Table 6. Reported estimated equations are restricted to regressions which excluded variables found to be insignificant in non-reported regressions (namely school size and the LEA dummies). School type variables were retained.

The main finding of interest is that social disadvantage (AVFSMDIFF) exerted a negative impact on examination improvement scores. Only in the case of GCSE2 change from 1992-98 was the social disadvantage variable insignificant. The latter finding can be explained by the partial correlation of 0.458 between AVFSMDIFF and spare capacity [13]. If spare capacity is not included in the regression equation, AVSFMDIFF is significant in the both GCSE2 equations. Higher levels of spare capacity – which are associated with higher relative social disadvantage - had a negative impact on examination improvement. For every 10 per cent more students eligible for free school meals than the LEA average, a school would have experienced a reduction of 0.2 percentage points a year in GCSE1 improvement, which is equivalent to 1.2 percentage points over the period 1991-98.

Furthermore, increases in the relative social deprivation of the school community (FSMDIFCHANGE) also reduced the rate of examination improvement. For every 1 percent that relative social deprivation increased annually, GCSE1 improvement was reduced on average by .08 to 0.9 percentage points a year and GCSE2 improvement cut by 0.06 to 0.05 percentage points a year.

The results also indicate that a lower the starting level of GCSE1 and GCSE2 results in 1991 boosted examination improvement over the period.

The average annual change in the schools' budget over the period was associated with an annual change in GCSE1 results in the same direction. For GCSE2 results, the annual average increase in the school's budget per student was a significant.

The only school type variable of significance in explaining changes in exam results was being an all girls' school for GCSE1 improvement from 1992-98, which had a positive impact and being a

selective school which had a negative impact.[14] It is interesting to note that GM schools, despite experiencing a growth in budget over time compared to LEA schools, did not improve examination results at a faster rate once other factors, are accounted for.

Table 6 Summary of regression equation results for GCSE examination improvement as the dependent variable

	GCSE1change91-98	GCSE1change92-98	GCSE2change91-92	GCSE2change92-92
Independent variables	B coefficient (t statistic)	B coefficient (t statistic)	B coefficient (t statistic)	B coefficient (t statistic)
Constant	2.52 (12.83)	1.173 (6.98)	8.98 (21.17)	5.19 (8.23)
Type				
SIXFORM	-0.04 (-.29)	-0.02 (-0.103)	-0.08 (-0.80)	-0.07 (-0.49)
DENOM	0.26 (1.27)	0.2 (0.79)	0.12 (0.80)	.37 (1.63)
SINGLSEX	0.18 (0.88)	0.78 (3.07)	0.06 (0.42)	0.09 (0.42)
GM	0.125 (0.93)		0.07 (0.63)	-0.11 (-0.66)
SELECTIVE	0.028 ((0.73)	-1.03 (-2.13)	-0.20 (-1.01)	-0.37 (-1.25)
AVFSMDIFF	-0.038 (-5.73)	-0.02 (-2.20)	-0.01 (-1.91)	0.0046 (0.52)
FSMDIFF-CHANGE	-0.08 (-5.2)	-0.09 (-4.63)	-0.06 (-4.51)	-0.048 (-2.74)
GCSE1_91	-0.033 (-5.73)	-0.017 (-2.33)		
GCSE2_92			-.094 (-17.88)	-0.051 (-6.49)
Student recruitment				
AVROLL	Insignificant[1]	Insignificant	Insignificant	Insignificant
SPARECAP	Insignificant	Insignificant	-1.26 (-4.16)	-1.43 (-3.17)
Budget variables				
BUDCHANGE	0.000005 (3.92)	0.0000076 (4.43)	Insignificant	Insignificant
BUDCHANGE/ STUDENT	Not significant	Not significant	0.0019 (2.04)	.0033 (2.38)
LEA dummy	LEA3 significant in some regressions but not consistently so.	Insignificant	Insignificant	Insignificant
Adjusted R squared	0.319	0.223	0.678	0.282
F statistic for fitted equation	16.75 (p= 0.000)	10.62 (p = 000)	59.77	12.6
Distribution of residuals	Normal	Normal	Evidence of remaining non-linearity after 9 outliers omitted[2]	Evidence of remaining non-linearity after 8 outliers omitted[1].

Note 1: where variables reported insignificant this is from tests of alternative specifications of the regressions on the dependent variable.

Note 2: attempts with some non-linear transformations of IVs did remove concentration of below zero DV residuals

3.3 SUMMARY: EXAM IMPROVEMENT AND SOCIAL DISADVANTAGE

The statistical analysis shows that the proportion of socially disadvantaged students exerted a negative impact on improvements over time in both measures of GCSE exam performance.

Schools which increased the proportion of socially disadvantaged students relative to the LEA average, not surprisingly experienced a further negative impact on exam improvement. Further regressions of the change in the proportion of socially disadvantaged students as the dependent variable (see Appendix 4) showed that being a GM or a denominational schools had a significant positive impact on the change in relative social disadvantage. Being a GM school on average led to a 1.1 percentage point reduction in the proportion of students eligible for FSM relative to the LEA average and being a denominational school led to a further 1.7 percentage point reduction. In addition, the percentage of students eligible for FSM in 1992 was significantly and negatively related to the change in relative social deprivation. Every 10 percent of students eligible for FSM in 1992 added on average 0.4 percentage points to the difference between the school's FSM percentage and the LEA's FSM percentage. (The regression estimates are reported in Appendix 4.)

This means that schools with higher concentrations of socially disadvantaged pupils, given they were not GM or denominational schools, suffered a dual handicap. Both higher relative social deprivation and the associated increase in relative social deprivation exerted a negative impact on the improvement over time in examination results.

4. SCHOOLS' FINANCIAL PERFORMANCE AND SOCIAL DISADVANTAGE

A main element of the quasi-market regulatory mechanism is that it rewards successfully performing schools with increased financial resources via the pupil-driven funding formula. Evidence on schools' differential financial performance over time (measured in terms of the change over time in various measures of the school's budget allocation) has been published elsewhere (Levacic and Hardman, 1998). We draw from this work to present a brief summary of evidence on the impact of the proportion of socially disadvantaged students' on schools' financial performance.

An indicator of a school's financial performance (BUDCHANGE) was obtained by calculating the average annual change in the school's budget share comparing one year with the next for the period 1991/92 to 1995/96. Multiple regression tests showed that the average annual change in student enrolment over the period was negatively and significantly related to social disadvantage (measured as the difference between the school's and LEA's FSM percentage). The estimated equation indicated that a school with an initial enrolment of 600 students and with a 10 percent higher FSM percentage than the LEA average would have experienced on average a loss of 5 pupils a year. Given the estimated relationship between budget change and change in pupil roll, this annual loss of pupils would have reduced the budget by an average of £7,400 a year (in 1990/91 prices). This estimate does of course assume other things remaining unchanged. It is a rough indicator of the magnitude of the impact of socially disadvantaged students on a school's ability to attract resources. (See Levacic and Hardman (1998) for further details.)

An additional source of evidence on the impact of quasi-market forces on schools with higher concentrations of socially disadvantaged pupils comes from dataset 2, the ICOSS survey of headteachers (Levacic et al., 1998b). Headteachers were asked whether competition had had a positive, negative, or negligible impact on pupil intake and the school budget. The responses are shown in Table 7.

Table 7 Impact of competition on pupil intake and budget share/annual maintenance grant (response to ICOSS survey)

	Positive effect	*Negative effect*	*No effect*
What effect do you judge competition to have had on your pupil intake?	47%	33%	18%
What effect do you judge competition to have had on your budget share/ annual maintenance grant?	28%	35%	34%

ANOVA tests confirmed that the relative social disadvantage index was significantly higher for the group of schools reporting a negative impact of competition on intake and budgets, as shown in Table 8. Here the average relative social disadvantage index for the groups of schools in each of the cells in Table 7 is given. Schools reporting a positive impact of competition on pupil intake and budgets have a lower percentage of students eligible for free school meals than the LEA average, and schools reporting a negative impact on intake and budgets have on average FSM percentages above the LEA average. These differences are statistically significant as shown in One way analysis of variance tests, reported in Table 8.

Table 8 Impact of competition on pupil intake and budget share/annual maintenance grant (response to ICOSS survey)

Relative social disadvantage index for schools grouped by perceived impact of competition on student intake and budget					
	Positive effect	*Negative effect*	*No effect†*	F statistic	Probability
What effect do you judge competition to have had on your student intake?	-2.58	3.66	.82	6.07	0.003
What effect do you judge competition to have had on your budget share/ annual maintenance grant?	-0.49	3.98	-3.13	7.05	0.001

Notes † Difference between School FSM and LEA FSM. Levene statistic shows that variance of this variable is homogeneous.

4.1 SUMMARY: FINANCIAL PERFORMANCE AND SOCIAL DISADVANTAGE

The evidence indicates an inverse relationship between schools' student recruitment - and hence financial performance - and the proportion of disadvantaged students. This suggests that schools with higher proportions of socially disadvantaged students have found it more difficult to thrive in the regulated quasi-market than more socially advantaged schools[15].

The analysis of the quantitative data indicate that the proportion of socially disadvantaged pupils was on average associated with a small decline in student numbers and hence loss of budget revenue. This effect reinforces the negative association between the rate of improvement of examination results and the school's relative social deprivation indicator and increases in this indicator over time.

In the next section we examine the qualitative data in order to understand better the relationships

between schools' improvement strategies and the nature of their student communities, particularly for schools with higher concentrations of socially disadvantage.

5. HOW ARE SCHOOLS' IMPROVEMENT STRATEGIES AND COMPETITIVE RESPONSES AFFECTED BY THEIR STUDENT COMMUNITIES?

5.1 RESPONSIVENESS

The impact of quasi-markets and public regulation is the product of dynamic processes involving complex interactions in the local arena between structure and agency : the former encompassing institutional (anatomic), cultural and social elements; and the latter involving the engagement of school personnel and others in the locality. In that engagement there is a degree (empirically variable) of responsiveness to the dynamics of the public-market. Responsiveness in such a context is multi-layered, meaning that it includes not only consumer responsiveness (associated with market theory) but also other forms - to superior political authorities and to professional expertise and ethics for example (see Woods et al 1998: 147-8). Responsiveness refers to change in the practice and character[16] of the agent (in this case an institutional agent, the school) so that practice and character better enable it to:

a) survive in its environment, by keeping or bringing them more into line with the needs, preferences, requirements, beliefs or values of stakeholder groups (clients, public authorities, etc),

and/or

b) maintain an appropriate cultural orientation, by keeping or bringing them more into line with what are taken to be important systems of thought (such as professional knowledge, beliefs and values).

Responsiveness entails successfully achieving to some degree (a) and/or (b).

A politically constructed public-market has in its design some idea of the incentives and sanctions which are meant to encourage certain types of response. The institution that fails to be adequately responsive *in the term of that particular public-market* is meant to experience consequences: loss of 'custom' and therefore of financial resources through the operation of the market elements and some form of external intervention through the public elements. A driving assumption is that institutional agents will seek to avoid such sanctions, and aspire to the incentives of success, by being appropriately responsive. But being a complex construction, a public-market's responsive-demanding influences are not necessarily looking for the same response, nor are necessarily complimentary: there may be conflicting responses required by different structural elements. A further complication is that the 'bottom line' in education is not (or is widely agreed not to be) measurable by the financial income of schools: the 'bottom line' is measurable only according to a criterion or criteria that themselves depend on decisions about which are the most important *values* concerning education. Thus responding successfully to market-like pressures might realise the promised financial rewards, but this in itself says nothing about the values-rewards or values-costs of such success. (Hence the dual aspect to responsiveness in the definition above.)

In this part of the paper we are exploring further, through the qualitative, case study data, the *barriers to responsiveness* that face socially disadvantaged schools. This concerns responsiveness in the sense of the capacity to respond to the challenges and uncertainties of a more market-like environment (Woods et al 1998: 150-155), but barriers may also extend to other forms of responsiveness such as responses to political demands or professional or cultural concerns. In

extreme cases the barriers are such that they can lead to a steep decline in the viability of a school, the so-called 'sink' schools, though this is not the inevitable result (see Woods et al 1998, pp181-183).

Earlier analysis concentrated on the data generated from interviews with 17 secondary headteachers selected from the ICOSS schools (Levačić and Woods 1999). This emphasised the need to attend to the myriad national and local factors that impinge upon any one school, in the context of which a particular variable - such as the school's student community - has, or fails to have, an impact. The discussion below draws upon case study data from three schools (selected from amongst those headed by the interviewed headteachers).

5.2 BACKGROUND ON CASE STUDY SCHOOLS AND METHODOLOGY

Selected background data on the schools (which have been given fictitious names), their locations and local education authority (LEA) are summarised in Table 9. Interviews were conducted at the schools in June and July 1998, the interviewees comprising:

Northtown	Shire	Easton
Headteacher	Headteacher	Headteacher
Deputy Headteacher	Deputy Headteacher	
Head of English	Head of English	Head of English
Head of Maths	Head of Maths	Head of Maths
Head of Science	Head of Science	Head of Science
SEN Co-ordinator	SEN Co-ordinator	SEN Co-ordinator
English teacher	Science teacher	Science teacher
Director of SEN Unit/ Senior Teacher		
Ten Year 10 students	Ten Year 10 students	Eight Year 10 students

The above interview data were supplemented by data from the respective headteachers who had been interviewed a year before as well; detailed data on each of the schools from the study's administrative data base; additional documentation and statistics obtained from the schools.

NORTHTOWN SCHOOL

Context

Northtown School is located in an industrial town (population just over 50,000) with high levels of unemployment due in large measure to the decline of heavy industry. The local authority is seeking to tackle its problems through a strategy of economic regeneration. The town is located in a predominantly rural county (population about 600,000), the county forming the LEA responsible for schooling in both rural and urban areas.

Regulatory Mechanisms

The school has been in special measures following its Ofsted inspection in 1997 and the LEA manages the school budget, instead of the usual situation in which responsibility for financial management is devolved to the school's governing body. Changes in the school are being driven by and large by the pressures of being in special measures.

Inter-school Relations

Relations between the five secondary schools in the town have been highly competitive with three

of the schools opting for grant-maintained status and one becoming a city technology college. Co-operation between local schools - for example, sharing sixth form provision[17] - has been a casualty of increased competition during the 1990s though there are signs that there is a growing willingness to establish co-operative relations. One catalyst for this is the incentive for schools and other local organisations to work together to bid for status as an Educational Action Zone.

Social Polarisation, Intake and Parental Support

Key data in relation to this are that in the 1990s (details in Table 9):

- the school's AAC experienced social polarisation, the gap between the schools with the highest and lowest FSM being 15 percentage points by 1998;
- the school's own proportion of FSM students increased from 9% to 23%.

The school houses a special needs unit which by its nature means that the student body contains a substantial number with special needs. However, the competitive climate has clearly adversely affected the intake balance. Recurring themes are the low self-esteem of students, an ability range increasingly skewed to the lower end as a result of greater competition between local schools, and a lack of support from parents for education.

> 'The unreflective parents who live locally who can't be bothered to get interested in the education debate at all, they say go to Northtown - end of discussion. The ones who actually go and see the schools on the open evenings and look and think about what they're doing and choose where the kids are going to go to, don't send them here.'
> (Senior Teacher and Director of Designated Special Provision, Northtown)

Some of the difficulties and challenges are described by the headteacher:

> 'There is an aggressiveness between them and that's their local community coming into the school and what I want to do is create a school where they can leave that at the gates. Where they can come in, be comfortable and concentrate on learning, where learning is seen to be first and foremost. And they can receive praise for that, they can see that they are making progress, they can feel good about themselves, raising that self esteem cos there isn't that here.'
> (Headteacher, Northtown)

'Headline' performance

Northtown School's 'headline' performance - i.e. the percentage of students gaining five 'good' GCSEs (grade C or above) - *declined* by an average of 1.29 percentage points per year in the 1990s to 21% in 1998 (Table 9).

Table 9: Background Data on Case Study Schools

Local Education Authority (LEA) **Approximate area of competition (AAC) School**

SCHOOL	LEA[18]			Selected data on case study schools								
		% Students entitled to FSM 1992-98	No. (%) of GM[19] schools 1995-96	Type of school	'Headline' performance: GCSE1[20] in 1998	Improvement rate 1991-8 GCSE1[21]	Improvement rate 1991-8 GCSE2	Improvement rate 1991-8 GCSE3[22]	% change in pupil roll 1991-98	Students entitled to FSM: 1992	Students entitled to FSM: 1998	Change in FSMDIFF 1992-8
Northtown	LEA 4	10.6%	10 (25%)	mixed 11-18 comprehensive	21%	-1.29	-0.71	-2.33	-5.4%	9%	23.3%	6.8
Shire	LEA 5	9.1%	9 (21%)	mixed 11-16 comprehensive	36%	3.00	-0.14	-0.83	3%	7%	6.8%	-3.1
Easton	LEA 2	24.7%	2 (7%)	mixed 11-16 comprehensive	13%	-0.57	2.29	1.33	50%	41%	54.6%	9

Note: Change in FSMDIFF is change in relative social deprivation 92/3 to 97/98
Relative social deprivation in year t, FSMDIFF, is School's FSM – LEAFSM.
Change in FSMDIFF is average FSMDIFF in 1992 and 1993 minus average FSMDIFF in 1997 and 1998. Therefore if index is positive relative social deprivation has increased.

Resources

Northtown School has had a declining budget in recent years. The budget is managed by the LEA with an 'overdraft' (a recurring annual overspend). The biggest impact has been the need to lose staff and for many remaining staff to teach outside their curriculum areas. Another consequence of the squeeze on staffing, as well as the relatively small student roll, has been the difficulty of setting (tracking) appropriately in maths: the Head of Maths referred to difficulties in setting appropriately, arising from staffing problem and size of school. Students interviewed commented forcefully on their experience of having a different maths teacher 'every two weeks'.

SHIRE SCHOOL

Context

Shire School is a mixed comprehensive taking students aged 11 to 16. It is located in a small rural town some 10 miles from the nearest major urban centre. Its LEA runs a selective system for secondary education in which the grammar schools select according to academic ability and other schools, such as Shire, do not select academically. The LEA has a relatively low percentage of pupils entitled to FSM. Recent years have been characterised by annual budget squeezes by the LEA. Although the county is geographically strung out and transport is a limiting factor in reaching variety of schools, there are significant parental movements between schools and there has been consistent spare capacity in local schools. The school has chosen to accept housing a unit for children with communication disorders), partly because it will secure the future of the school: this can be handled, the headteacher believes, whereas a unit for children with educational or behavioural disorders would cause serious image problems.

Regulatory Mechanisms

The school is not in special measures but as with all schools in England is subject to the national curriculum and to Ofsted inspections and required to produce performance measures which are published.

Inter-school Relations

The fact that the school is in a selective system colours the competitive context. Shire School cannot compete with the grammar schools which take the top ability range. There is thus a tiered system of competition with rivalry between the non-selective schools like Shire.

Social Polarisation, Intake and Parental Support

Key data in relation to this are that in the 1990s (details in Table 9)

- the school's AAC experienced social polarisation, the gap between the schools with the highest and lowest FSM being 35 percentage points by 1998;
- the school's own proportion of FSM students fell slightly from 7% to 6.8%.

There is a perception, not universally held amongst staff, that the ability range of the student intake has worsened in the past. Those who are of this view do, however, consider that it is now getting better, or that there are signs it is about to. Although its ability range is skewed to the lower end and it loses some middle class students to other schools, Shire School does not have the same degree of difficulty regarding quality of intake as the other case study schools. This is partly to do with the rural character of its location, which reduces the capacity for reaching other school and

probably aids its attraction to some parents from the nearby town who send their children to Shire rather than the town schools. Further factors helping the school are the closure of one of the town schools which had come to be seen as a predominantly 'black' school (see Woods 2000) and the success of Shire's headteacher in improving the school's image after a number of years when there had been little continuity in the post. The school had gained a new feeder school in a village drawing from an area of families with relatively high socio-economic status. There is consequently strong demand for places and it is now oversubscribed.

Even so, selection and of students not passing the test for grammar schools leaves its impact: as the Head of Maths explained, there is a need to build pupils' confidence because they are stamped as rejects.

'Headline' performance

Shire School's 'headline' performance - i.e. the percentage of students gaining five 'good' GCSEs (grade C or above) - improved on average by 3 percentage points per year in the 1990s to 36% in 1998 (Table 9).

Resources

The demand for places already noted means that the school is not suffering from a dramatic squeeze on resources. This is reflected in the comments of staff, though there was some concern that it would not be possible to keep maths classes to reasonable sizes. The LEA has cut school budgets in past years and the school has responded by reducing senior management and concentrating as far as possible on maximising funds available to support teaching.

EASTON SCHOOL

Context

Easton School, a mixed comprehensive taking pupils aged 11 to 16, is in the least competitive LEA context (amongst the study's six LEAs), in which only two secondary schools opted for GM status, there is no academic selection and a relatively high percentage of pupils entitled to FSM is apparent. Covering a large, industrial city, the LEA is strongly supportive of co-operation between schools, though there have been tensions between schools and the LEA as a result of squeezes by the authority on school budgets. The exercise of parental choice is facilitated by transport links in a city environment.

However, spare capacity has reduced throughout the city in recent years principally through school re-organisation and school closure. A further factor tempering parental choice is that the city, which is hilly, has a tradition of 'white working class village communities' with little interaction, with the effect of dampening (though not eliminating) movement to schools outside those areas.

Regulatory Mechanisms

The school was one of the first in the City to be inspected (by a LEA team) under the OFSTED framework in 1994. It passed with a few weaknesses being noted. Lack of communication meant that the senior management did not realize that HMI expected the school to be addressing serious weaknesses. HMI got impatient that no progress was being made and in Autumn term 1996 inspected the school and announced that the school was in Special Measures.

Inter-School Relations

There is not a great sense of institutional rivalry at Easton, which is consistent with the City being perceived by hedateachers as the least competitive area in the study (Table 9). Despite its being in special measures, the school is oversubscribed. Some teachers but not others perceive the school to be in competition for more able students in the locality. It would appear that the school for many years has attracted a particular market niche: white working class parents without educational aspirations and has sufficient of these to fill the school. Easton School serves an economically depressed catchment area which has by and large consistently sent its children to the school. Having experienced a decline in its roll from 1100 in 1988/89 to 725 in 1991/92 the role rose to 1070 in 1993/4 and has remained steady at this level. An important factor contributing to its returning to its 'steady-state' enrolment was the LEA's closure of a nearby school, which extended Easton's catchment area.

Social Polarisation, Intake and Parental Support

Key data in relation to this are that in the 1990s (details in Table 9):

- the school's AAC experienced social polarisation, the gap between the schools with the highest and lowest FSM being 49 percentage points by 1998;
- its own proportion of FSM students increased from 41% to 55%.

The ability range of students is skewed to the lower end. Although the Head of Maths viewed parents as very supportive, the prevailing view is that most parents are uninterested or even hostile to education. As the Head of English, who had recently been working in another school with similar socio-economic character in the same LEA:

> '...the school is doing a lot to try to counter the culture outside school'. 'I don't think the community is very supportive of the school at all. There's a lot of neutrality and some aggression' 'Parents of more able children are anxious'.

The headteacher's 1998 report to the governing body stated: 'parents of Year 7 pupils required to sign an attendance agreement as a measure to combat an endemic culture of condoned absence in many families'.

'Headline' performance

Easton School's 'headline' performance - i.e. the percentage of students gaining five 'good' GCSEs (grade C or above) - declined on average by 0.51 percentage points per year in the 1990s to 13% in 1998 (Table 9).

Resources

Easton School was created by an amalgamation of two schools in 1988. The LEA has had financial difficulties and has not invested in new buildings or maintenance at the school. The school operates on two sites a mile apart (a 10-minute walk) and there are plans to consolidate on one site from January 2001. (Dilapidated 1960s buildings are on the site which is due to close.) Because of lack of facilities on one site (e.g. laboratories) it is not possible to timetable a year group on one site only so there is much movement between sites and students 'bunking off' during the walk.

There has been a high level of long term staff sick leave and absences. On one of the research visits to the school, for example, 21 teachers were absent on sick leave or

courses. Poor teaching was a major factor in HMI's concern. (One third still unsatisfactory in May 1998 HMI report compared to 5% nationally (OFSTED annual report for 1997/97). In 1998 three teachers were on competency procedures and the headteacher was investigating staff absences.

Special measures has brought in more resources via the LEA and subsequently from local business and national government by setting up an Education Action Zone.

5.3 SCHOOL RESPONSE

Boundary spanning

The scope amongst these schools for responding competitively through promotional and scanning[23] activity to improve their image and attractiveness is limited. As most schools do, they work at good links with their feeder schools and try to present positive aspects of the school to the local community. But it is felt nevertheless at Northtown particularly that the schools with the better reputations get more prominent coverage in the local press. For all the schools, their positioning in the league tables is an inherent problem, the 'headline' performance measure placing them some way down the league. This is seen as difficult, if not impossible, to counter by drawing attention to the need to take into account differences in intake.

As a science teacher at Shire school explained, improving school image is dependent on improving results. In fact Shire school of the three is the only one that has been able to improve its 'headline' performance and its image has been perceived as improving too. Nevertheless, the continuing effects of a relatively poor reputation are evident: there was evidence of students ashamed to say they attend Shire and of students preferring other schools on reputational grounds.

The other two case study schools have a much more intractable reputational problem. Asked how Northtown was seen in relation to other schools, the SEN Co-ordinator simply described it as 'bottom', a reputational position of which students are well aware: they had asked through the student council that school's name be changed because of its bad associations. Awareness of Easton's poor reputation is evident too amongst staff and students.

> 'You go to teacher training and then one person can go to somewhere like Easton and get bombarded with insults all day and the other one can go somewhere like King Harold and have children which co-operate.'
> (Easton Student)

This was re-inforced by the same student who in the corridor after the group interview confided that 'If people know you're from Easton School they think the worse of you and its more difficult to get work experience'.

From a staff point of view, Easton's Head of English explained:

> 'I know parents of children in the area through other links, and I know that they have a certain horror that their children might be coming here which is understandable given traditional reputation and the behaviour at this school and I'm one of the team that's got the, a huge job on to try to change that.'

Promoting the school, if not absent, is not a high priority at Easton. It is prey to other pressures.

> When I came you know, I said this school should be in the press more. Let's enter every competition, let's get involved and I've had to eat my words because we just haven't got the time or the energy. You need the 25th hour in the day!
>
> (Head of English, Easton)

The impression is of a school which has been rather isolated and inward looking. Under special measures its focus is still inward, with the focus on improving itself as a learning community and involving its parent community better, but not at that time to go beyond this. Given a strategy to stay within its market niche and respond to regulatory pressure by improving quality of learning and educational attainment of its existing clientele - and given that it is not suffering from recruitment problems - there is also no incentive to scan the 'market' to improve competitive responsiveness.

There was no evidence of a strategy of *social targeting* at any of the schools. (By social targeting is meant actions and signals which are aimed at attracting the more able and middle class students - Woods et al 1998) What is more evident are the signals, deriving from characterising traits of the school (location, building, the student body, school history etc), which are either beyond direct control or very difficult to manage. To take an example of negative signals, student behaviour such as that which led to Northtown students being barred from the local museum after a school visit, re-enforces the school's poor reputation. Other messages may work to the advantage of a school. The rural position of Shire School in itself is a bonus, distancing it from urban deprivation and problems. Both Shire and Easton also benefited to a degree from some parents' negative, racial perceptions of other schools which have larger numbers of ethnic minority students. These are also examples of what is implicated in the idea of social targeting, namely *social selection* by parents: the seeking out by parents of a school that has, or appears to have, superior social characteristics (more middle class, more ethnically acceptable, more able students). The result of characterising traits of the school interacting with social perceptions and patterns in the local area - can be described as *structural social targeting*: the effects of targeting occur without anyone in the school necessarily intending it to be so.

The case study schools are examples of the poor performers that the educational system developed in England since the 1980s is meant to prompt to do better: in the case of Northtown and Easton they are the 'failing' schools. To understand what is occuring however, something of the insight that was lodged into the theoretical

framework of criminology since the 1960s needs to be similarly placed within educational theorising about school effectiveness. Labelling theory pointed to the degree to which crime is a product of socially constructed definitions: rather than confronting crime as a fact to be measured (or for us, we can read educational failure by schools), labelling theory encapsulated its *dyadic* nature - the need to understand both the action itself and the perceptions of that action (Young 1999: 39). It is of course understood by school staff that the product of perceptions and assessments can create or exacerbate difficulties which in turn serve to affirm those perceptions and assessments. Thus for example the more middle class parents shun a school like Northtown, the more it resembles the very type of school they do not want for their children; the labelling of a school as 'failing' and as needing to be put into special measures may have the effect of further skewing its intake to the lower ability end. The process can work in all sorts of subtle ways - the behaviour of Northtown students that led to the ban from the local museum (cited earlier) might well be a case of living up, or down, to the reputation of Northtown students, leading to reinforcement of perceptions and parental movements away from the school.

Priorities

Elsewhere (Woods et al 1999) we have distinguished between *positional performance focus*, which involves special attention being given to the more able and those *borderline* students who have the potential to benefit the school's relative position in terms of key performance measures, and *inclusive focus* in which attention is driven by need. There was evidence of some degree of *positional performance focus* amongst a minority of interviewed headteachers (Levačić and Woods 1999). It was recognised, however, the classification of schools between *inclusive focus* and *positional performance focus* is not a precise one. For example, there are cross-pressures entailing resistance, if not completely successful, to incentives to target by 'positional value' (see Woods et al., 1999 and Woods, 2000).

In the initial interview with the head of Northtown School, carried out in 1997 some time before the case study investigation, the headteacher quite firmly pointed to a positonal performance focus:

> "I suppose like many schools, instead of focusing your efforts on everybody in the year group, we've focused our efforts on those who we see as being C/D borderlines."
> (Headteacher, Northtown)

During the case study a year later, the headteacher places his approach in a wider context not wedded solely to the A to C grades.

> 'There is much attention I think, you know that clearly because A-Cs is a reported performance that is that the pressure is to deal with that and yet I would endorse Tim Brighouse's recommendation that you look at A-E's because A-E's are about kids who can then go on, continue to learn. You know, if they're below grade E then their ability to pick up things at a later date and to follow on through on life long learning is more limited. So what you ought to be doing is ensuring that people get up to that base line level of E across the board if...'
> (Headteacher, Northtown)

Even so, the positional performance focus is underlined when he goes on to say that "one has to try and keep the reporting indicators high" (p11) and when others, such as the Deputy Headteacher, Head of English, Head of Maths and the SEN Co-ordinator, point out how extra support and attention is given to the borderline students. GCSE results are the priority, and within this context especial attention is give to those on the borderline who might help improve the school's 'headline' performance.

It is a similar story in Shire School.

> 'And what we did last year and I think needs to be developed further, is we picked up a mentor system where we had senior staff within the school or staff with a designated pastoral responsibility interviewing students who we felt were underachieving at that C/D border.'
> (Headteacher, Shire)

> Whereas a school used to be judged about the pleasantness of the students which came out, it is more to how well the school is doing, what percentage gained 5 A-C's and of course the league tables put more pressure on because a parent now looking at a school will first of all look at how well did this school do in subjects A, B and C, will my child leave this school with sufficient academic achievements to gain the position he or she wants.... We have responded to that pressure, we have improved the number gaining 5 or more A-C's and I think the incentive was not there as much as it is now.
> (Head of Maths, Shire)

As Shire's Head of Science explains, she is not *personally* led by a market-driven need to concentrate on results: the incentive is to do it for students. But, nevertheless she is sure that *drive overall* is parental choice which affects what is conveyed through the school management systems: "They are monitoring all the departments looking for the maximum 5 A-C percentage".

None of this should be interpreted as indicating a cynical and exclusive focus on borderline students or on GCSE results. There is a continuing and significant pull towards equality of treatment that means that there is a continual tension between a positional performance focus and an inclusive one, and towards preserving a view of education that is not confined to attainment of academic qualifications. This was evident in all the schools but was most evident at Shire, where the interviewed students voiced the opinion that all of the attention is not given to the 'bright' students. The ambiguity is captured by Shire's Head of Science:

> 'I don't know whether we hone in on C/Ds I mean there is always that at the back of your mind because you know your A-C percentages are going to be quoted and therefore I think you look more closely at the D's now than we used to look at the D's but we chase the whole lot and we're very proud of the fact that we rarely have a student ungraded in Science even though we enter the whole year group and we only have a very small sprinkling of G's. Our A-D grades are usually 70-75%.'
> (Head of Science, Shire)

The shift in priorities at Easton School is particularly interesting. Under special measures, from 1997, the school is being required to respond to the preferences of those determining the national agenda for school improvement. This is in effect an imposition on the local community of a collective preference, as expressed through an elected central government, for higher educational achievement and hence employability. Prior to going into Special Measures, the school had reached an accommodation with its students and community: a high absence rate of students and staff was tolerated and low achievement accepted. A science teacher (at school for 20 years, rated good by students) explained that teachers in the past had concentrated on maintaining good relationships with the students:

> 'We've always tried to keep a balance between the development of the child and academic results. But now we need to change the balance. Now we are putting more pressure on them the behaviour is getting worse.'
> (Science teacher, Easton)

The Acting Head of Maths who had spent the whole of her career, over 20 years, at the school put it this way:

> the staff here have always worked for the student as a whole.
> You know they've help in their development in so many ways, it's never been just an academic focus;
> it is more a sort of pastoral type of system ..and you actually get along quite well with some of the more difficult students, more challenging students.
> If you change the emphasis completely to the academic, now that's when you sometimes hit a bit of a brick wall because they rebel a little against that.
> (Acting Head of Maths, Easton)

A different cultural orientation is expected of Easton. The major factors identified by HMI as contributing to failure were poor teaching (condoned by management) and the absence of a learning culture in the school. The absence of the latter probably reflects parental and community attitudes to education. (Parents rarely express concern about their child's progress and condone absence, while a vocal minority of students set out to deliberately challenge attempts to establish a learning environment in the classroom). Improvements to teaching and the changes in management are responses to a particular professional orientation in which teachers and school managers are committed to continuous improvement and render accountability for their performance to regulators (via performance measurement and inspection). Easton School is therefore having to increase the degree of positional performance focus through for example mentoring for borderline students.

Improvement strategies

A major strategy at Easton is the improvement of teaching quality. Concern had existed for some time about poor teaching but inspection by HMI (Her Majesty's Inspectors) brought it out into the open. Easton's Headteachers admitted that, whilst some excellent teaching had been observed, the ' most disappointing aspect of May 98 report [by HMI] was that only two thirds of teaching observed was satisfactory'. The strategy, begun in 1997 subsequent to going into special measures, has involved:

1. Replacing Maths, Science and English Heads of Departments and bringing in new teachers.

2. Introducing clear system of line management with review and evaluation and middle management level
3. Lesson observation programme with feedback and support for teachers needing it.
4. Improved quality of teaching: each lesson must start with learning objectives, be well structured and paced. (The school's senior management team believes that good teaching will improve behaviour and rather than get behaviour good to start with.)
5. New curriculum plans and Schemes of Work.
6. INSET programme.
7. Capability procedures being taken with respect to 3 teachers.

A problem is that 'To be an effective teacher at Easton you have to be above average' (Headteacher's report to the governing body, Easton). Interviews with students affirmed how sensitive they are to the motivation and strengths and weaknesses of teachers.

> Girl A:
> You know that because if a teacher walks in straight in like Miss M---, she's a good teacher, they walk in the room, they've got the lesson prepared, they know exactly what they're doing, you've got a learning objective, you know what you're meant to be doing, and they're just not going to accept anything else and they act like they don't expect you to do anything else.
>
> When teachers walk in and the whole body language tells you..... people like Miss J., a quiet teacher, they come creeping into the lesson, "can you be quiet please?" and the kids think yeh course, whatever you say, by the way, do you know what I mean, and they don't listen.
>
> Boy:
> she comes in and she says this is what you've got to do, people ignore her, you carry on talking, she starts having a go and people just laugh.

Girl A:

> They all don't want to be here and you know they don't want to be here and they don't like this school. And you just know that, and you just pick it up. I'd rather be anywhere here, I'd rather be in Morocco, but I'm just going to be here because I've got to earn some money. And you know there are some teachers which have got a genuine love for the kids, Miss M sometimes, Miss A .

(Students, Easton)

This is echoed in the other schools. At Northtown there was much criticism, though amongst the group interviewed there was probably a slight majority who believed things were getting better.

At Shire School, students were also critical of disruptive students in class and could also identify particular teachers that were poor in their discipline and attracted lack of respect from students, pointing to problems in History and Art for example. A good teacher, as they explained it, is one that 'you want to like' as one of them put it. But, on the whole the tone of the Shire student comments was positive. They talked about

teachers being helpful; they said that they could approach teachers and that points they did not understand were explained to them The whole tone supported the message that had been coming through from the Headteacher and other staff. Even asked to be critical they did not take up the opportunity, in contrast to the Northtown and Easton students. Shire students were of the view that they were given plenty of encouragement and motivation: as one put it, 'They're always encouraging us to go one step beyond that. They said we can push whatever we've got on our forms at the beginning of the year, we can push it up a grade say...'. Again that chimes in with what many of the staff were saying in their interviews.

At each of the schools there was a raft of changes being brought in to improve matters. Discipline policy was an important focus at Easton and Northtown.

At Easton a range of measures seek to tackle behaviour issues, including attendance, punctuality and student exclusions:

- Discipline policy includes posting behaviour rules in all classrooms, teacher training on behaviour management, a referral room for students sent out of lessons, a duty officer on half day rota, and improved teaching as solution to behaviour problems. (At Northtown too better quality teaching was seen as a key to reducing disruption in lessons.)
- Great efforts to improve attendance involve monitoring and making quicker contact with parents in the event of absence. (Attendance was 82% in spring 1998 which exceeded target: needs to be >85% to get out of special measures.)
- Tactics to improve punctuality include late signing, commendations for good punctuality, and teacher patrols outside.
- Exclusions policy (expelling students either temporarily or permanently) was under review with strategies such as inviting parents to work with the child to be used as an alternative.

Improved systems for planning, training and support, including setting targets within the school, are instituted at all the schools. At Northtown there was an emphasis on improving classroom management, on teachers relating their work to the school development plan, setting targets for themselves and reflecting on how they might improve their practice, and on mentoring of students.

At Easton, monitoring and tracking of student progress involves target setting of individual students with the senior management team and Heads of Department using analysis of exam (value added) and attendance data (Action Plan (AP) 1). This assessment is used to inform lesson planning, identify target groups of students and set individual targets. Plans are to support this with student progress monitoring.

At Shire, the improvement strategy includes:

- analysis of GCSE results (mapping incoming VQRs {a measure of verbal reasoning when a student enters the school} against mock examination results and against then final GCSE results), identifying departments and asking questions where results have not been as good as expected;
- target setting based on tests (reading test scores and CAT tests) (though they monitor more than target at moment according to the Head of Science);
- progress interviews with students;
- form tutors acting as mentors, with monitoring and evaluation to be further

developed;

- opportunities for additional study and teacher contact, though for example after-school lessons, encouraging students to come and talk and to have access to any member of staff, e.g. at lunchtimes;
- building confidence and generating enthusiasm;
- having teachers teach to their specialism, in science for example (this contrast with Northtown where teachers go outside their subject).

For Shire School there is more evidence of success in that there appear to be, compared with the other two schools, fewer behaviour problems, less disruption in class and improving GCSE results. For both Northtown and Easton there are many more problems to tackle, many of which are vividly illustrated through the perspectives of their students. It is not at all clear, however, that the better position of Shire School is the result of more effective strategies or effective strategies more effectively implemented. These may indeed play a part but the difference is likely to be based in an amalgam of factors.

5.4 THE CUMULATIVE IMPACT

Northtown School has suffered seriously from falling rolls and redundancies which has meant that the management of the school has been about "firefighting" at the expense of longer term strategies. The senior teacher (also head of the SEN Unit) responsible for staff development explained:

> 'we can't do all the things we actually need to do within the sorts of time frames we want to do them with the kind of resource space that we've got. So basically well if you come in every morning well you say ok I've got 25 things to do which is 23 I'm not going to do today because there's no way you can do them all. One of the hardest things about working in this particular school, this particular context, is that you already know you can't do half the things, what's the phrase for this? There would be no point in anybody coming in and telling me how to do my job better because I'm already not performing at the standard that I know I would be able to perform if some of the surrounding circumstances were different. I don't need any more knowledge about how to do the job better what I actually need is a context that actually allows me to do it. And we're all in the same boat, we're all cutting corners, we're all doing things less professional, less well than we really want to...
> .....There isn't enough staff, there isn't enough money, there isn't enough time, there is a case of too many problems, too many different kinds of problems from too large a proportion of the student body.'
> (Senior Teacher and Director of Designated Special Provision, Northtown)

A similar concentration of problems exists at Easton and is summarised by the Head of English who is able to compare it with a school with a similar socio-economic character:

> 'I feel daunted by is the amount of "fire-fighting" and disciplinary problems that a school like this has. I find that really sapping actually because what you find is that you are doing your wonderful developmental work and bringing the department on and trying to reassure them and build their confidence with these new ways of working and then when you look up at your actual punters

> in the classroom you have to have great inner strength to keep the faith because the majority of the pupils are great. They've learned to keep their heads down because the significant minority are so active in showing their dislike of school and all that it stands for. It's not just a silent refusal to do work it's a "we've come to school to be in your face because it's cold outside" sort of attitude and which day to day, lesson by lesson is utterly exhausting ..... But whereas in other schools naughty children would be reported to their Head of Department and then to the Head of Year and then put in detention, you just get laughed out of court here. Because the naughty children are so hard it's a sort of bravado thing really and there are so many that the heads of year just cannot get to everything that they need to.'
> (Head of English, Easton)

At Shire School there are problems but not to the same level of concentration. Northtown and Easton appear to be further away from the beneficial, cumulative, whole-school effect of social mix that Thrupp's (1999) study found to be significant for the educational achievement of working class students. They suffer from the outcome of "numerous smaller effects" that arise from their intake characteristics and which result in differences in schools according to degree of social mix (Thrupp 1999: 123). Thus, using Thrupp's framework (ibid., p123-4), Northtown and Easton students have, for example:

- less exposure to higher SES peers,
- less advantageous instructional processes (they experience less engaged, lower difficulty classes for instance),
- organisational and management processes that are less able to cope because guidance and discipline systems and problem management are more pressured and financial resources are more tight.

This framework might be seen as an extension or elaboration of part of the 'judicious mix' of conditions and support suggested by Woods et al (1998: 210) as necessary for a school to overcome difficulties in a public-market. Thrupp details the *school effects* and their linkage to intake. These can be seen as conjoining other variables in the 'judicious mix' model such as:

- *degree of competition* (This is low for Easton and acts to its benefit.),
- *consumer or community perceptions and support* (Easton is able to rely on a substantial community that consistently sends its children to the school, whereas Northtown has no such secure base.),
- *local educational policy* (Easton, with other schools in the City, has experienced very tight LEA resourcing for schools, though at the same time the LEA has sought to protect schools from negative effects of competition.),
- *national regulatory mechanisms* (Embedded in national educational policy, these are highly significant in the more centralised education system that has been created in England. They have major repercussions, both negative - the effects of labelling for example arising from national policy on performance criteria and inspections - and positive, where national decisions successfully channel more resources to schools in greater need.)

The full picture takes all of these factors into account. Not all of them will be necessarily consistently positive or consistently negative for any one school, as is evident from the three case study schools.

6 CONCLUSIONS

At the beginning of the paper four questions were posed concerning the impact of quasi-market forces and performance regulation on schools serving socially disadvantaged communities. We can now attempt an overall summary of our findings and conclusions on these four issues.

6.1 POLARISATION

Between 1992 and 1998, in the ICOSS sample of schools, there was increased social polarisation in slightly more localities (approximate areas of competition) than experienced decreased social polarisation. The school hierarchy index of social polarisation, which is derived from the difference between bottom and top schools in each AAC, reveals slightly more polarisation than the segregation index, which is derived from the number of students who would need to change schools for all schools to have equal social disadvantage. Measuring polarisation at the level of the approximate area of competition suggests that measuring it at a more aggregated level, for instance at the local education authority level, will conceal localised polarisation.

Increased social polarisation was associated with a greater intensity of competition between schools, as indicated by the proportion of GM schools in the approximate area of competition and by the two measures of the degree of competition obtained from the head teacher survey. Although academic polarisation was less marked than social polarisation, both were significantly related. However, there is no evidence that social polarisation was higher in more socially disadvantaged locales or in those with lower examination results.

6.2 IMPACT OF SOCIAL DISADVANTAGE AT SCHOOL LEVEL ON IMPROVEMENT IN EXAMINATION RESULTS

Generally examination results have been improving year-on-year, particularly for the 'headline' indicator of the percentage of students with 5 or more grade A* - C GCSEs. However, the proportion of socially disadvantaged students in a school community exerted a negative impact on the rate of improvement over 1991-98 (or 1992-98) in the proportion of students obtaining 5 or more A*- C GCSEs and the proportion gaining 5 or more A* - G GCSEs.

Schools which had increased their proportion of students eligible for free school meals relative to the LEA average, had, not surprisingly, experienced a further negative impact on GCSE exam improvement. Schools with higher concentrations of socially disadvantaged students, which were neither grant maintained nor denominational, suffered a further handicap in that they had a greater tendency to experience an increase in the percentage of socially disadvantaged students relative to the LEA norm. These schools therefore suffered a dual handicap in attempting to improve results, from both the level of social disadvantage and its intensification over time.

SCHOOLS' FINANCIAL PERFORMANCE AND SOCIAL DISADVANTAGE

Higher concentrations of socially disadvantaged students tended to result in a small loss in student numbers year-by-year and hence a gradual decline in the school's budget allocation. Schools which reported a negative impact of competition on student recruitment and budgets had on average a significantly higher proportion of students eligible for free school meals than schools reporting that competition had a positive or no impact on recruitment and budgets.

Since an increase in budget revenue over time was a factor associated with examination improvement, once social disadvantage had been controlled for, it is evident that market-responsive financial flows were a further factor making examination improvement more difficult for schools with higher concentrations of socially disadvantaged students.

6.4 SCHOOL RESPONSIVENESS AND SOCIAL DISADVANTAGE

The qualitative data provide further understanding of the relationships revealed by analysis of the quantitative data and show how socially disadvantaged schools face greater barriers to responsiveness. The more concentrated is social disadvantage, the more likely a school is to be characterised by and vulnerable to the following:

- the cumulative impact of within-school effects, including more difficult and disrupted learning environments and management processes less able to cope;
- the cumulative impact of contextual factors, i.e. where the following occur the impact is worse for disadvantaged schools:
  - high degree of competition;
  - poor consumer or community perceptions and support for the school;
  - negative local educational policy effects which, for example, squeeze on budgets;
  - negative national educational policy effects which, for example, label schools as 'failing';
- a malign dyadic relationship in which school character and performance, and perceptions of that character and performance, exacerbate each other. These factors render promotional responsiveness largely ineffective and substantive responsiveness more difficult.

It is also evident that where some or all of the within-school effects and contextual factors are reasonably positive or improving, they begin to have a cumulatively beneficial effect and help encourage a benign dyadic relationship.

Socially disadvantaged schools are under intense external pressure to improve 'headline' performance (the proportions of students gaining 5 or more A*- C GCSEs) and this external pressure is distributed down within the school. Strategies reflecting a positional performance focus are found in all the schools, though there are also strategies to retain a more inclusive focus evident to varying degrees within the schools. This is not particular to socially disadvantaged schools, as similar pressures apply to all schools. However, national regulatory mechanisms, in the form of post-inspection special measures, are powerful means of effecting change and shaping priorities in schools that are deemed to be 'failing'.

6.5 SOCIALLY DISADVANTAGED SCHOOLS: OVERALL ASSESSMENT

Both the quantitative and qualitative evidence from the ICOSS study indicate that the proportion of socially disadvantaged students in a school community has exerted a negative impact on attracting resources and improving examination performance - and that the two factors are interrelated. The quantitative data indicate the statistical significance of these relationships while the qualitative data highlight the factors and

processes that cumulatively form barriers to the responsiveness of such schools to both market and regulatory pressures.

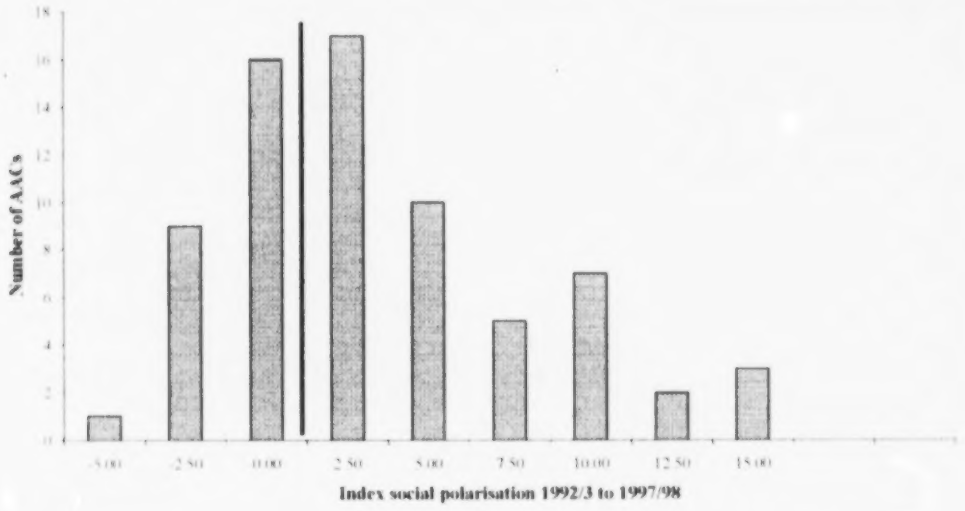
The research on which these conclusions are based was undertaken before any impact from more recent government measures explicitly targeted at raising educational standards in schools serving socially disadvantaged communities, such as Education Action Zones and Excellence in Cities, could have been observed. The evidence presented in this paper supports the need for measures such as these.

APPENDIX 1: POLARISATION

School hierarchy index

Figure 1 below is a histogram of the school hierarchy social polarisation index by Approximate Areas of Competition (AACs). This shows the bias of the distribution towards increased social polarisation. There are larger absolute values for increased polarisation than for reduced polarisation. Forty four AACs experienced increased polarisation and twenty seven a decrease.

Figure 1 Histogram of AACs: social polarisation (school hierarchy index)



School segregation index

Figure 2 shows the distribution across AACs of polarisation between 1992/3 and 1997/98 as measured by the school segregation index. This shows that in absolute terms the increase in polarisation, where it occurred, was larger than the decrease in AACs with declining polarisation.

Figure 2 Histogram of AACs: social polarisation (segregation index)

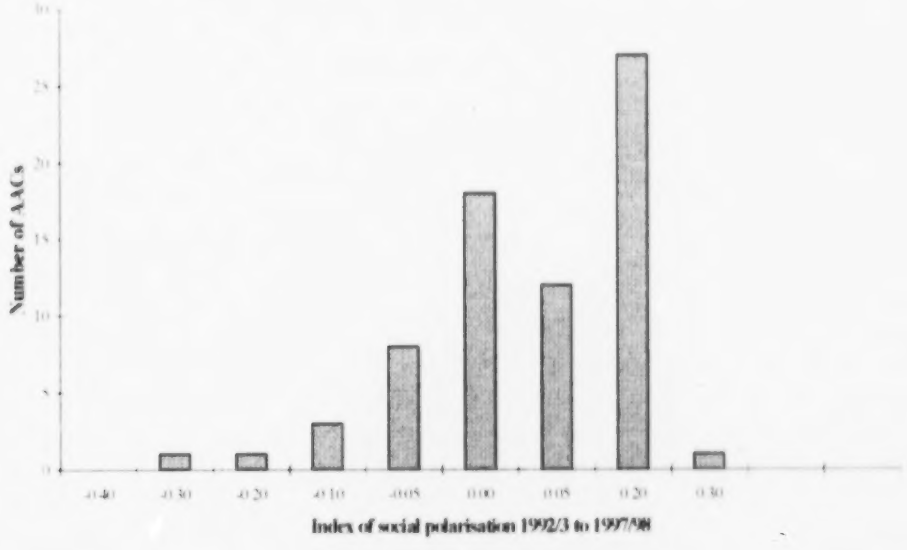


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Table A1 Pattern of social disadvantage in schools in AAC 405

School	*Percentage of students eligible for free school meals*						
	1992	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
A	13.0	17.0	23.0	27.0	26.8	28.4	38.6
B	14.0	17.0	17.0	17.0	16.9	14.4	12.0
C	15.0	16.0	16.0	19.0	19.4	19.6	18.2
D	11.0	14.0	13.0	15.0	14.7	13.8	11.3
E	4.0	5.0	5.0	6.0	5.7	7.5	8.0
AAC Hierarchy Index	11	12	18	21	21	21	31
	Social segregation index for each school[24]						
School	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
A	0.019	0.038	0.096	0.119	0.118	0.138	0.257
B	0.029	0.038	0.036	0.019	0.019	0.001	0.009
C	0.039	0.028	0.026	0.039	0.044	0.051	0.054
D	0.001	0.008	0.004	0.001	0.003	0.007	0.016
E	0.071	0.082	0.084	0.091	0.094	0.070	0.048
Segregation Index	0.31	0.30	0.31	0.29	0.31	0.26	0.28

Table A2 Characteristics of 25 closed schools (1991- 1998) compared to continuing ones in ICOSS database

Mean values for each category of school	*Closed schools*	*Continuing schools*		*F statistic*	*p*
		LEA	GM		
Size of school (roll in 1990/91)	456	810	924	18.95	·000
Percentage of pupils entitled to FSM in 1992	31.7	18.3	11.4	18.78	000
GCSE results in 1991 (percentage of Year 11 gaining 5 or more grades A* to C)	19.3	31	40.7	10.95	000

Note : The F statistic is for one way ANOVA for differences in means. These are significant.

APPENDIX 2: ICOSS SURVEY

RESPONSES ON PERCEPTIONS OF COMPETITION

In the ICOSS survey (Levacic et al., 1998b), headteachers were asked to describe the degree of competition between local secondary schools. The responses were:

highly competitive	93 (41%)
fairly competitive	103 (45%)
little/no competition	30 (13%)
no response	1 (0.4%)
Total	**227 (100%)**

In the survey, respondents were also asked to judge the number of secondary schools with which their school was in competition. The responses were:

none	3 (1%)
one	9 (4%)
two to four	111 (49%)
five to eight	80 (35%)
nine or more	24 (11%)
Total	**227 (100%)**

Headteachers' responses as to whether they regarded the degree of competition between local schools as high, fairly high or little/none were scored as 1, 2 and 3 respectively for the purposes of analysis.
Headteachers' responses to the number of schools with which they perceived their own school be in competition were scored as follows:
0= no competitors;
1= 1 competitor;
2= two to four;
3 = five to eight;
4 = nine or more.

Because not all of the schools in all the AACs had responded to the survey it was decided to include only 54 AACs with at least 50% of the schools responding[25]. This gave 54 AACs containing 200 schools.

Using the responses to these two questions, two measures of the degree of competition at the AAC level were created.
The first measure was an ordinal measure of the 'degree of perceived competition' for the AACs obtained from the rating of each headteacher's perceived degree of competition as 1, 2, or 3. This led to distinguishing three groups of AACs:

- Group 1: high degree of competition if the mean value of headteachers' perceived degree of competition was $<= 1_{2\,3}$;
- Group 2: fair degree of competition if the mean value of headteachers' perceived degree of competition was $>1_{2\,3}$ & $<= 2_{1\,3}$;
- Group 3: little or no competition if the mean value of headteachers' perceived degree of competition was $> 2_{1\,3}$.

There were very few AACs in which headteachers' perceptions of the degree of competition differed by more than one classification.

The second ordinal measure of the degree of competition in the AACs is the number of schools with which headteachers reported their school to be in competition. It was decided to measure the number of competitor schools in an AAC by the modal number reported by the AAC headteachers.

APPENDIX 3 SCHOOL BUDGET ADJUSTMENTS

School budgets were expressed in real terms by adjusting for inflation. Central government calculates real expenditure by deflating by the Gross Domestic Product price index. This, however, underestimates cost inflation to public service sectors where salaries rise faster than general inflation. We therefore estimated the rate of cost of inflation for schools as 0.7*rate of increase in teacher salaries + 0.3*rate of increase of GDP price deflator at factor cost. The weighting of 0.7 was chosen to reflect roughly the average ratio of teachers' salaries in school budgets. The relevant figures were obtained from the annual *School Teachers' Pay and Conditions Document* and *Economic Trends*. The indices for correcting school budget shares for price inflation are shown in Table A3 below.

A particular problem in arriving at a comparable measure of schools' budget shares was posed by differences between LEA and GM school funding rules. Over the period investigated, GM schools (which comprised approximately 32 per cent of our sample compared to a national average of 22 per cent) were funded via the DfEE in the form of an annual maintenance grant (AMG). This was based on a calculation of what the school would receive under its previous LEA's funding formula plus an addition to cover those services provided to LEA schools directly by the LEA from its centrally retained funds. The Funding Agency for Schools provided data on GM schools' budgets in which the AMG was reported separately from the additional 'central allocation' GM schools received in lieu of LEA central services. We used the AMG as GM schools' budget share and, in order to standardize across LEA areas assumed that GM schools received the same value of central allocation as LEA schools. We did not include other sources of grants to GM schools (e.g. for Grants for Educational Support and Training (GEST), and initial setting up costs) as we could not obtain the costs of similar resources allocated to LEA schools through the LEA's central retentions. To the extent that GM schools did in fact receive grants that exceeded the value of the equivalent resources provided via LEA central retentions to LEA schools, we have underestimated the budgets of GM schools.

Changes over time in school budgets also had to be adjusted for differences in the proportion of available funds which LEAs delegated to their schools. The maximum amount that a LEA could delegate was known as the Potential Schools Budget. Of this a proportion – at least 85% - had to be delegated to schools. The funds delegated to schools were called the Aggregated Schools Budget. If a LEA increased its schools' budgets (the ASB) because it delegated a higher proportion of the PSB, then schools did not experience a real increase in their funding. Therefore in order to make valid comparisons of real budget changes over time, changes in LEAs' ASB/PSB ratio over time have to be adjusted for. The adjustment factor modifies school budget shares to the size they would have been, had the proportion of the PSB delegated by

the relevant LEA remained at the ratio in operation for 1990/91.

The ASB/PSB adjustment factor is specific to each LEA and was obtained from annual section 42 budget statements. For year T the ASB/PSB adjustment index is:

[ASB/PSB ratio in Year T] ÷ [ASB/PSB ratio in base year (1990/91)]

The values for this index for each year and LEA are shown in Table A3.
The total adjustment factor is the inflation index multiplied by the ASB/PSB index.

Table A3 Cost inflation and ASB/PSB correction indices

	Inflation adjustment	ASB/PSB adjustment					
		LEA 1	LEA 2	LEA 3	LEA 4	LEA 5	LEA 6
1990/91	1	1.000	1.000	1.000	1.000	1.00	1.000
1991/92	1.07	1.021	1.035	0.999	0.970	1.007	1.002
1992/93	1.16	0.984	1.017	1.007	0.988	0.998	0.996
1993/94	1.19	1.009	0.978	0.990	0.988	0.995	0.984
1994/95	1.22	1.016	0.975	0.983	1.007	0.953	0.972
1995/96	1.26	1.049	1.006	1.022	1.047	0.990	1.006

APPENDIX 4 ADDITIONAL MULTIPLE REGRESSIONS

Table A4 Regression of change in relative social deprivation (change in difference between school's FSM and LEA FSM between 1992-93 and 1997-98)

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	.666	.654		1.019	.309
sixth form provision	-7.893E-02	.569	-.009	-.139	.890
denominational status	-1.680	.820	-.112	-2.048	.041
selective status	-.506	1.073	-.034	-.471	.638
single sex status	-1.411	.846	-.117	-1.668	.096
GM status 95/96	-1.121	.522	-.121	-2.145	.033
FSM percentage 1992	3.897E-02	.019	.134	2.041	.042

Adjusted R square = 0.062, F = 4.25

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NOTES

[1] The top ranked schools in terms of 5+ grade A* - C GCSEs had improved this GCSE indicator from 1994 to 1998 by an average of 1.65% p.a. compared with 0.57% for the bottom ranked schools. The top schools had also reduced the proportion of students eligible for free school meals (by –0.56%) while the bottom ranked schools had increased this proportion (by 0.03%).

[2] National, external examinations taken at the end of Year 11, the last year of compulsory schooling when most candidates are aged 16.

[3] Gorard and Fitz divide through by twice the number of students eligible to FSM in the area to avoid what they state to be double-counting. In fact there is no double counting as two sets of students have to switch schools if school rolls are to remain unchanged (one set from a school with above the Area FSM percentage and one set from a school with below the Area FSM percentage). As dividing by a scalar makes no difference to the interpretation of the segregation index, halving the index or not is a matter of indifference.

[4] Grant Maintained schools were created by the 1988 Education Reform Act, which enabled schools to opt out of LEA control and become directly funded by the DfEE. Initially these schools had more advantageous funding and were permitted a degree of selection of their student intake. These schools were brought back under LEA control, as foundation schools, by the 1997 School Standards and Framework Act. They retain a higher degree of autonomy over staff and capital assets than LEA community schools.

[5] This is an examination taken at the end of Year 11 (at the ages of 15-16) at the end of compulsory schooling. It is externally set and marked. Students normally take between 8 and 10 subjects and almost all students enter. Since 1992 national 'league' tables of examination results at school level have been published for all schools. The percentage success rate is expressed as the proportion of all the school's registered students who attained the age of 15 in the August prior to taking GCSEs the following summer.

[6] The exam result in year t-1 was subtracted from the exam result in year t, these changes were summed

over the period (1991 or 1992 to 1998) and the average of these differences calculated. This means that in our measure a one percentage points increase is valued equally whatever the base year examination result. Had we used the annual change in the exam result as a percentage of the previous year's exam result then schools starting from a low base would have been deemed to be improving at a faster rate than those starting from a higher level.

[6] Young people can take post-16 qualifications in colleges of further education or in sixth form colleges in some areas.

[8] The reported statistics do not fully reflect the number of students eligible for free school meals, since schools rely on parents reporting eligibility. Parents may not report eligibility if their child does not take up its entitlement to free meal.

[9] The governing body may choose to admit more than the standard number or it may be forced to do so if parents appeal successfully against a school's decision not to admit their child. Hence capacity utilisation can exceed 100%.

[10] Data were collected on schools' budget shares (i.e. the funds allocated to schools via formula). The budget share does not include the whole of the school's revenue income: it does not include categorical grants and self-generated income (both small amounts in general). Data on these were not available from LEAs.

[11] There is a potential problem of endogeneity in that the change in school budgets depends on examination improvement, if student recruitment is a function of exam improvement, since student numbers are the main determinants of the size of a school's budget. The partial correlation between the annual average change in school budgets and GCSE1 exam improvement is significant (.0.24); but the correlation with respect to GCSE2 improvement is insignificant. There is significant partial correlation between budget change and average spare capacity of -0.498.

[12] Annual average change in school budgets is for the years 1990/91 to 1995/96, since budget data were not collected after 1996. Budget data had to be collected from LEAs and are not available nationally yet.

[13] A stepwise regression of average capacity (the dependent variable) shows that AVFSMDIFF is the first variable entering the equation, explaining 22% of the variance in capacity and is highly significant.

[14] It was more difficult for schools already having a very high percentage of students with 5+ A* to C and A* - G grades to improve further.

[15] However, it should be noted that as the data do not extend before 1990, it could be the case that such schools were steadily attracting fewer pupils and fewer resources over time prior to the introduction of quasi-markets.

[16] Character includes such attributes as knowledge, skills, beliefs and values.

[17] Sixth Form provision refers to arrangements by schools for post-compulsory education up to age 18.

[18] There are six LEAs in the ICOSS study data base.

[19] GM = grant maintained schools, i.e. schools that opted out of LEA control. Since 1999 these have been brought back into the LEA framework and have mostly become what are now referred to as foundation schools.

[20] GCSE1 stands for the proportion of students gaining 5 or more passes at grades A* - C (i.e. 'good' passes): this has been given the greatest official prominence as a single indicator of a school's academic achievements.

[21] See previous footnote.

[22] GCSE3 stands for the proportion of students gaining 1 or more passes at grades A* - G.

[23] By scanning is meant activity which is aimed at better understanding of the school's 'market'.

[24] The social segregation index for each school is proportion of students who would have to change schools to equalise the FSM ratio as a proportion of the total school roll whereas the denominator for the AAC is the total number of students eligible for FSM.

[25] The competition measures were also constructed for a the more stringent condition of requiring 75% responses from 75% of the schools in an AAC and the frequency and mean compared with those for AACs with the less stringent requirement of at least 50% of schools responding. The frequencies of the competition measures by AAC and the mean was similar for both sets of AACs, so the more including 50% criterion was used, enabling more AACs to be included in the analysis.

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